

AMENDMENTS TO THE SPECIFICATION

Please replace the abstract with the attached new abstract.

Please replace paragraph [0013] with the following amended paragraph:

[0013] Figure 2 illustrates a representative echo canceller circuit 20 implemented by an adaptive least mean square (LMS) algorithm device having a combiner 21 and a digital transversal filter 22. The transfer characteristic of the echo canceller circuit 20 may be expressed by the equation:

$$e[m] = y[m] - x[m] * h_k[m] \qquad \underline{e_k[m] = y_k[m] - x_k[m] * h_k[m]}$$

where * is the convolution operator and $h_k[m]$ are the filter coefficients for the k^{th} iteration of the LMS algorithm. The filter coefficients are generated by the equation:

$$h_{k+1}[n] = h_k[n] + \mu \cdot e_k[m] \cdot x_k[m-1] \qquad \underline{h_{k+1}[n] = h_k[n] + \mu \cdot e_k[m] \cdot x_k[m-1]}$$

where $e[m]$ is the error signal 23, $x[m]$ is the far-end excitation 24 25, and μ is the step size.

The step size for the normalized LMS algorithm can be expressed as:

$$\mu = \frac{2 \cdot \mu_0}{f(P_x) \cdot g(N)}$$

where μ_0 is the nominal step size, P_x is the far-end power, N is the filter length in taps, and $f()$ and $g()$ are suitable monotone, non-decreasing functions.